FITZGERALD, David J. Application No.: 09/462,682

1.

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Please cancel claims 10, 27, 29, 30, 33, 37 and 38 without prejudice to subsequent revival.

(once amended) A non-toxic Pseudomonas exotoxin A-like ("PE-

Please add new claims 44 and 45.



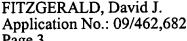
like") chimeric immunogen comprising: (1) a cell recognition domain of between 10 and 1500 amino acids that binds to a cell surface receptor; (2) a translocation domain comprising an amino acid sequence substantially identical to a sequence of PE domain II sufficient to effect translocation to a cell cytosol; (3) an amino acid sequence encoding an endoplasmic reticulum ("ER") retention domain that comprises an ER retention sequence, (4) an epitope presenting domain located in between the translocation domain and ER retention domain comprising (i) an amino acid sequence of between 5 and 350 amino acids that encodes an epitope non-native to PE and (ii) two cysteine residues native to PE that form a cysteine-cysteine disulfide bonded loop, wherein the epitope is inserted in between the two cysteine residues.



2. (once amended) The immunogen of claim 1, wherein the cell recognition domain is domain 1a of PE, the translocation domain is domain II of PE, and the ER retention domain is domain III of PE, wherein domain III lacks ADP ribosylation activity.



- 7. (once amended) The immunogen of claim 1 wherein the translocation domain comprises amino acids 280 to 364 of SEQ ID NO:2.
- 8. The immunogen of claim 1 wherein the translocation domain is domain II of PE.



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- (once amended) The immunogen of claim 1 wherein the ER 12. retention domain is domain III of PE, wherein domain III lacks ADP ribosylation activity.
- (once amended) A method of producing antibodies against an 24. epitope non-native to PE, wherein the epitope exists within a systeine-cysteine loop comprising the steps of:
- (i) inoculating an animal with a non-toxig Pseudomonas exotoxin A-like ("PE-like") chimeric immunogen, the PE-like chimeric immunogen comprising: (1) a cell recognition domain of between 10 and 1500 amino acids that binds to a cell surface receptor; (2) a translocation domain comprising an amino acid sequence substantially identical to a sequence of PE domain II sufficient to effect translocation to a cell cytosol; (3) an amino acid sequence encoding an endoplasmic reticulum ("ER") retention domain that comprises an ER retention sequence, (4) an epitope presenting domain located in between the translocation domain and ER retention domain comprising (i) an amino acid sequence of between 5 and 350 amino acids that encodes an epitope non-native to PE and (ii) two cysteine residues native to PE that form a cysteine-cysteine disulfide bonded loop, wherein the epitope is inserted in between the two cysteine residues.
  - (ii) collecting antiserum
- (once amended) The method of claim 24 wherein the amino acid 25. sequence that encodes an epitope non-native to PE consists of between about 5 and about 50 amino acids.
- (New) The method of claim 25, wherein the amino acid sequence 44 that encodes an epitope non-native to BE consists of between about 15 amino acids and about 50 amino acids.

